

CLAIMS

1. (Canceled)
2. (Currently amended) A method of tunneling a transaction based protocol through a generic Internet protocol (IP) transport, the method comprising:
providing a generic messaging structure that includes a transport protocol, a message buffer, a source-address field and one or more data fields for transparent routing of a user protocol over the IP transport during a host-to-host communication or telecommunication session;

providing an application program interface to the generic messaging structure, the application program interface including a mechanism for a user to choose a desired transport and associated protocol for transparently routing the user protocol over the desired transport in accordance with the chosen transport protocol within the one or more data fields;

creating a base class library including plural defined source and header files, and

providing a mechanism for deriving a transaction-based protocol-specific class that is compatible with the base class library, the transaction-based protocol-specific class further being derived based in part on the chosen transport protocol.
3. (Previously presented) The method of claim 2, wherein the transaction-based protocol-specific class is derived using an object-oriented inheritance based mechanism.
4. (Previously presented) The method of claim 2 including compiling the transaction-based protocol-specific class when a transaction and the transport protocol are determined.
5. (Currently amended) A method of tunneling any related data-, control-, or routing-related protocol through a generic Internet protocol (IP) transport, the method comprising:

creating a base class library including plural defined source and header files, the base class library further including base class constructors of virtual, copy, and assignment, and generic access methods;

choosing a transport protocol for transparently routing a user protocol over the IP transport; and

providing a mechanism for deriving a transaction-based protocol-specific class that is compatible with the base class library, the transaction-based protocol-specific class further being derived based in part on the chosen transport protocol, wherein the transaction-based protocol-specific class is derived using an object-oriented inheritance based mechanism.

6. (Previously presented) The method of claim 5 which further comprises:

providing a generic messaging structure that includes the transport protocol, a message buffer, a source-address field and one or more data fields for transparent routing of the user protocol over the IP transport during a host-to-host communication or telecommunication session.

7. (Previously presented) The method of claim 5 which further comprises:

providing an application program interface to a generic messaging structure, the interface including a mechanism for a user to choose a desired transport and associated protocol for transparently routing the user protocol over the transport in accordance with the chosen transport protocol within the generic messaging structure.

8. (Previously presented) A method of tunneling any related data-, control-, or routing-related protocol through a generic Internet protocol (IP) transport, the method comprising:

creating a base class library including plural defined source and header files, the base class library further including base class constructors of virtual, copy, and assignment, and generic access methods;

providing a mechanism for deriving a transaction-based protocol-specific class that is compatible with the base class library, the transaction-based protocol-specific class further being derived based in part on the chosen transport protocol; and

compiling the transaction-based protocol-specific class prior to a run-time selection of the chosen transport protocol, and

selecting at run-time the pre-compiled transaction-based protocol-specific class for the chosen transport protocol, wherein the transaction-based protocol-specific class is derived using an object-oriented inheritance based mechanism.

9. (Previously presented) A computer-readable medium including an application programming interface stored on the computer-readable medium for transparently routing data between hosts in an Internet protocol (IP) transport, comprising:

a message buffer data structure defining a protocol-generic parent class, message, source-address and data fields for a chosen transport protocol;

a message creation mechanism for creating a message and adding it to the message buffer data structure; and

a protocol creation mechanism for deriving a protocol-specific child class based on the chosen transport protocol that renders new protocol-specific sub-fields of the protocol field of the message buffer data structure, where the application programming interface is operable to:

compile the transaction-based protocol-specific class prior to a run-time selection of the chosen transport protocol, and

select at run-time the pre-compiled transaction-based protocol-specific class for the chosen transport protocol.

10. (Previously presented) The computer-readable medium of claim 9 in which the protocol-specific child class is derived using an object-oriented inheritance based mechanism.

11. (Cancelled)

12. (Previously presented) The computer-readable medium of claim 10, wherein the message creation and protocol creation mechanisms include computer-readable and computer-executable software instructions.

13. (Previously presented) The computer-readable medium of claim 12, including software source code and headers in C/C++ programming language form.

14. (Canceled)

15. (Currently amended) A computer-readable medium containing a program for tunneling a transaction based protocol through a generic Internet protocol (IP) transport, wherein when the program is executed by at least one device it is operable to:

provide a generic messaging structure that includes a transport protocol, a message buffer, a source-address field and one or more data fields for transparent routing of a user protocol over the IP transport during a host-to-host communication;

provide an application program interface to the generic messaging structure, the application program interface including a mechanism for a user to choose a desired transport and associated protocol for transparently routing the user protocol over the desired transport in accordance with the chosen transport protocol within the one or more data fields;

create a base class library including plural defined source and header files, and

provide a mechanism for deriving a transaction-based protocol-specific class that is compatible with the base class library, the transaction-based protocol-specific class further being derived based in part on the chosen transport protocol.

16. (Previously presented) A computer-readable medium containing a program for tunneling a data-related protocol through a generic Internet protocol (IP) transport, wherein when the program is executed by at least one device it is operable to:

create a base class library including plural defined source and header files;

provide a mechanism for deriving a transaction-based protocol-specific class that is compatible with the base class library, the transaction-based protocol-specific class further being derived based in part on a chosen transport protocol;

compile the transaction-based protocol-specific class prior to a run-time selection of the chosen transport protocol; and

select at run-time the pre-compiled transaction-based protocol-specific class for the chosen transport protocol.

17. (Previously presented) The computer-readable medium in accordance with claim 16, wherein the program is further operable to:

provide an application program interface to a generic messaging structure, the interface including a mechanism for a user to choose a desired transport and associated protocol for transparently routing a user protocol over the transport in accordance with the chosen transport protocol within the generic messaging structure.

18. (Previously presented) The method of claim 2 wherein the transport protocol is operated on by a signaling function and wherein the user protocol may be routed over the transport without a switching function.

19. (Previously presented) The method of claim 2 including populating a message structure of the transaction-based protocol-specific class with tag-length-value (TLV) trios when the transaction-based protocol-specific class is derived.

20. (Previously presented) The computer-readable medium in accordance with claim 16, wherein the program is further operable to:

provide a generic messaging structure that includes the transport protocol, a message buffer, a source-address field and one or more data fields for transparent routing of a user protocol over the IP transport during a host-to-host communication or telecommunication session.